

What is claimed is:

1. A digital picture signal processing apparatus, comprising:

picture processing means for compressing a captured digital picture signal; and

mode designating means for generating a signal that designates a picture processing operation of said picture processing means to a first mode or a second mode,

wherein when the first mode is designated, said picture processing means generates first compressed picture data of which the digital picture signal is compressed by a non-inversible encoding method, and

wherein when the second mode is designated, said picture processing means generates second compressed picture data of which the digital picture signal is digitized and the digitized picture signal is compressed by an inversible encoding method.

2. A digital picture recording apparatus for recording a picture as a digital signal to a record medium, comprising:

picture capturing means for capturing a picture and generating a digital picture signal;

picture processing means for compressing the captured digital picture signal;

mode designating means for generating a

signal that designates a picture processing operation of said picture processing means to a first mode or a second mode; and

recording means for recording an output  
5 signal of said picture processing means to a record medium,

wherein when the first mode is designated, said picture processing means generates first compressed picture data of which the digital picture signal is compressed by a non-inversible encoding method, and

wherein when the second mode is designated, said picture processing means generates second compressed picture data of which the digital picture signal is digitized and the digitized picture signal is compressed by an inversible encoding method.

3. The apparatus as set forth in claim 1 or 2, wherein the captured digital picture signal is a digital color picture signal.

4. The apparatus as set forth in claim 1 or 2, wherein the non-inversible encoding process is performed by compressing a digital picture signal corresponding to an orthogonal transforming process and an entropy encoding process.

5. The apparatus as set forth in claim 1 or 2, wherein the inversible encoding method is performed by registering a pattern of any length of a

data stream to a dictionary and outputting a registered number as an encoded output signal when the same pattern takes place.

6. The apparatus as set forth in claim 1 or 2,  
5 wherein said picture processing means converts the first compressed picture data and the second compressed picture data into respective files.

7. The apparatus as set forth in claim 6,  
wherein the second compressing picture data is converted into a GIF (Graphics Interchange Format) file.

8. The apparatus as set forth in claim 7,  
wherein said picture processing means performs a process for digitizing a digital picture signal and a process for converting the digitized data into an index value of a GIF color table at a time.

9. The apparatus as set forth in claim 2,  
further comprising:

reproducing means for reproducing compressed  
20 picture data recorded on a record medium,

wherein said picture processing apparatus decompresses the reproduced compressed picture signal, generates a reproduced picture, and displaying the reproduced picture to displaying means.

10. The apparatus as set forth in claim 9,  
25 further comprising:

enlarging means for enlarging the reproduced

picture displayed on said displaying means.

11. The apparatus as set forth in claim 10,  
wherein said recording means records the  
enlarged picture to the record medium.

12. A digital picture signal processing method,  
comprising the steps of:

(a) compressing a captured digital picture  
signal; and

(b) generating a signal that designates a  
picture processing operation performed at the step (a)  
to a first mode or a second mode,

wherein when the first mode is designated,  
the step (a) is performed by generating first  
compressed picture data of which the digital picture  
signal is compressed by a non-inversible encoding  
method, and

wherein when the second mode is designated,  
the step (a) is performed by generating second  
compressed picture data of which the digital picture  
signal is digitized and the digitized picture signal is  
compressed by an inversible encoding method.

13. A digital picture recording method for  
recording a picture as a digital signal to a record  
medium, comprising the steps of:

(a) capturing a picture and generating a  
digital picture signal;

(b) compressing the captured digital picture

signal;

(c) generating a signal that designates a picture processing operation performed at the step (b) to a first mode or a second mode; and

5 (d) recording an output signal that is output at the step (b) to a record medium,

wherein when the first mode is designated, the step (b) is performed by generating first compressed picture data of which the digital picture signal is compressed by a non-inversible encoding method, and

wherein when the second mode is designated, the step (b) is performed by generating second compressed picture data of which the digital picture signal is digitized and the digitized picture signal is compressed by an inversible encoding method.

10 14. A data record medium for recording a first picture file and a second picture file in such a manner that the first picture file and the second picture file are distinguishable, the first picture file being compressed in a non-inversible encoding method, the second picture file being compressed in an inversible encoding method.

20 15. A digital picture processing apparatus for converting captured color picture information into a digitized picture, comprising:

means for creating a histogram that

represents the distribution of the number of pixels of luminance data of color picture information; and

means for detecting the maximum value and the minimum value of the histogram and deciding the intermediate value thereof as a threshold value,

wherein the color picture is converted into a digitized picture with the threshold value of the intermediate value.

16. The apparatus as set forth in claim 15, wherein when the maximum value or the minimum value is obtained, a predetermined offset is assigned.

17. The apparatus as set forth in claim 15, wherein when the difference between the maximum value and the minimum value is less than a predetermined value, a fixed value instead of the intermediate value is designated as the threshold value.

18. The apparatus as set forth in claim 15, wherein the intermediate value is adjustable.

19. A digital picture processing method for converting captured color picture information into a digitized picture, comprising the steps of:

(a) creating a histogram that represents the distribution of the number of pixels of luminance data of color picture information; and

(b) detecting the maximum value and the minimum value of the histogram and deciding the

intermediate value thereof as a threshold value,

wherein the color picture is converted into a digitized picture with the threshold value of the intermediate value.

- 5        20.        A digital picture recording apparatus for recording a picture as a digital signal to a record medium, comprising:

picture capturing means for capturing a color picture;

picture processing means for converting the captured color picture into a digitized picture corresponding to a threshold value; and

recording means for recording an output signal of said picture processing means to the record medium,

wherein said picture processing means creates a histogram that represents the distribution of the number of pixels of luminance data of the color picture, detects the maximum value and the minimum value of the histogram, and converts the color picture signal into a digitized picture with the threshold value that is the intermediate value of the maximum value and the minimum value.

21.        The apparatus as set forth in claim 20,

wherein when the maximum value or the minimum value is obtained, a predetermined offset is assigned.

22.        The apparatus as set forth in claim 20,

wherein when the difference between the maximum value and the minimum value is less than a predetermined value, a fixed value instead of the intermediate value is designated as the threshold value.

23. The apparatus as set forth in claim 20, wherein the intermediate value is adjustable.

24. A digital picture recording method for recording a picture as a digital signal to a record medium, comprising the steps of:

(a) capturing a color picture;

(b) converting the captured color picture into a digitized picture corresponding to a threshold value; and

(c) recording an output signal that is output at the step (b) to the record medium,

wherein the step (b) is performed by generating a histogram that represents the distribution of the number of pixels of luminance data of the color picture, detecting the maximum value and the minimum value of the histogram, and converting the color picture signal into a digitized picture with the threshold value that is the intermediate value of the maximum value and the minimum value.

25. A digital picture recording apparatus for recording a picture as a digital signal to a record medium, comprising:



picture capturing means for capturing a color picture;

picture processing means for converting the captured color picture into a digitized picture corresponding to a threshold value; and

recording means for recording an output signal of said picture processing means to the record medium,

wherein said picture processing means converts the captured color picture into a picture having a predetermined size or a predetermined number of pixels, decides a threshold value corresponding to the converted picture, and generates a digitized picture corresponding to the threshold value.

26. A digital picture recording apparatus for recording a picture as a digital signal to a record medium, comprising:

picture capturing means for capturing a color picture;

picture processing means for converting the captured color picture into a digitized picture corresponding to a threshold value; and

recording means for recording an output signal of said picture processing means to the record medium,

wherein said picture processing means thins out the captured color picture, generates a thinned

picture, decides a threshold value corresponding to the thinned picture, and generates a digitized picture corresponding to the threshold value.

27. A digital picture recording apparatus for recording a picture as a digital signal to a record medium, comprising:

picture capturing means for capturing a color picture;

picture processing means for converting the captured color picture into a digitized picture corresponding to a threshold value; and

recording means for recording an output signal of said picture processing means to the record medium,

wherein said picture processing means decides a threshold value corresponding to a part including an object to be digitized selected from the captured color picture and generates a digitized picture corresponding to the threshold value.

28. The apparatus as set forth in claim 25, 26, or 27,

wherein the captured picture is capable to be converted into a recorded picture having a selected size or a selected number of pixels.

29. The apparatus as set forth in claim 25, 26, or 27,

wherein said picture processing means creates

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a histogram that represents the distribution of the number of pixels of luminance data of the converted picture, detects the maximum value and the minimum value of the histogram, and designates the intermediate value of the maximum value and the minimum value as the threshold value.

30. The apparatus as set forth in claim 26, wherein the thin-out process is performed by thinning out lines of the color picture.

31. The apparatus as set forth in claim 26, wherein the thin-out process can be varied corresponding to an object.

32. The apparatus as set forth in claim 27, wherein the part is displayed, and wherein the position and size of the part are changeable.

33. A digital picture recording method for recording a picture as a digital signal to a record medium, comprising the steps of:

(a) converting a captured color picture into a digitized picture corresponding to a threshold value;

(b) recording the digitized picture to the record medium;

(c) converting the captured color picture into a picture having a predetermined size or a predetermined number of pixels;

(d) deciding a threshold value corresponding

to the converted picture; and

(e) generating a digitized picture corresponding to the threshold value.

34. A digital picture recording method for recording a picture as a digital signal to a record medium, comprising the steps of:

(a) converting a captured color picture into a digitized picture corresponding to a threshold value;  
(b) recording the digitized picture to the record medium;

(c) thinning out the captured color picture so as to generate a thinned picture;

(d) deciding a threshold value corresponding to the thinned picture; and

(e) generating a digitized picture corresponding to the threshold value.

35. A digital picture recording method for recording a picture as a digital signal to a record medium, comprising the steps of:

(a) converting a captured color picture into a digitized picture corresponding to a threshold value;

(b) recording the digitized picture to the record medium;

(c) deciding a threshold value corresponding to a part including an object to be digitized selected from the captured color picture; and

(d) generating a digitized picture

corresponding to the threshold value.

36. A digital picture transmitting method for transmitting a picture as a digital signal to a communication medium, comprising the steps of:

5 (a) converting a captured color picture into a digitized picture corresponding to a threshold value;

(b) transmitting the digitized picture to the communication medium;

(c) converting the captured color picture into a picture having a predetermined size or a predetermined number of pixels;

(d) deciding a threshold value corresponding to the converted picture; and

(e) generating a digitized picture corresponding to the threshold value.

37. A digital picture transmitting method for transmitting a picture as a digital signal to a communication medium, comprising the steps of:

10 20 (a) converting a captured color picture into a digitized picture corresponding to a threshold value;

(b) transmitting the digitized picture to the communication medium;

(c) thinning out the captured color picture so as to generate a thinned picture;

25 (d) deciding a threshold value corresponding to the thinned picture; and

(e) generating a digitized picture

corresponding to the threshold value.

38. A digital picture transmitting method for transmitting a picture as a digital signal to a communication medium, comprising the steps of:

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- (a) converting a captured color picture into a digitized picture corresponding to a threshold value;
  - (b) transmitting the digitized picture to the communication medium;
  - (c) deciding a threshold value corresponding to a part including an object to be digitized selected from the captured color picture; and
  - (d) generating a digitized picture corresponding to the threshold value.
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